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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/823,455	03/30/2001	John I. Garney	2207/10730	5716

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EXAMINER
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LEFKOWITZ, SUMATI

ART UNIT	PAPER NUMBER
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2189

DATE MAILED: 10/31/2003

7

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application N .

09/823,455

Applicant(s)

GARNEY, JOHN I.

Examiner

Sumati Lefkowitz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 October 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 19-33 is/are rejected.
- 7) ☒ Claim(s) 11-18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_                      6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. Claims 1-33 are pending.

***Specification***

2. The disclosure is objected to because of the following informalities:  
- on pages 2 and 6, the related application serial no. is missing  
Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-5, 8, 21-27, 29-32 are rejected under 35 U.S.C. 102(e) as being anticipated by Kejser et al., 6,381,666 (hereinafter Kejser).

As to claim 1-5, 8, 21-27, 29-32, Kejser discloses a system for communication between a host (note Figure 2, element 1) and a device (note Figure 2, elements 3a,3b,3c,3d), comprising a host (note Figure 2, element 1) coupled to a storage element (note Figure 6, RAM 53) by a first high-speed bus (note Figure 6, USB interface 50 implies presence of USB) and a device (note Figure 2, elements 3a,3b,3c,3d) coupled to a data forwarding element (note Figure 7, REX

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controller 61, USB interfaces 63,64,65,66) by a second high-speed bus (note Figure 7, USB interfaces 63,64,65,66 imply presence of USB), wherein the data forwarding element is coupled to the storage element via a data transmission medium (note Figure 6, UTP interface 52 and Figure 7, UTP interface 60), the device is to receive a preliminary message (i.e., request R1) from the host and the device is to send a reply (i.e., Is1), in response to the preliminary message, for storage in the storage element (i.e., memory of LEX subsystem 4), wherein after at least one secondary (i.e., new request R2) message is sent from the host to the storage element, the reply is to be sent from the storage element to the host (note column 13, line 64 – column 14, line 27), wherein the preliminary message is a data request (i.e., request R1 for input data), the at least one secondary message is a data request follow-up (i.e., new request R2 which is same as first request R1, so is a follow-up request), and the reply is a data reply (i.e., input data packet Is1), wherein the preliminary message is a data send (i.e., notification of output data transmitted as Out Addr packet), the at least one secondary message is a data send follow-up (i.e., new Out Addr packet addressed to same device, so is a follow-up request), and the reply is a data receipt acknowledgement (i.e., Ack packet) (note column 20, lines 30-64), wherein the first high speed bus and the second high speed bus operate under USB protocol (note column 3, lines 20-54, column 13, lines 12-37 and Figures 2, 6, and 7), further comprising a first transceiver (i.e., inherent in UTP interface 52 of Figure 6 to allow for transmission/reception of data at local expander LEX 4 via UTP) coupled between the storage element and the data transmission medium and a second transceiver (i.e., inherent in UTP interface 60 of Figure 7 to allow for transmission/reception of data at remote expander REX 5 via UTP) communicatively coupled between the data transmission medium and the data forwarding element, wherein the first

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transceiver and the second transceiver are to provide protocol translation (i.e., inherent that the transceivers within UTP interfaces of Figures 6 and 7 provide protocol to allow for transmission/reception of USB signals over UTP cable), allowing non-USB protocol (i.e., UTP transmission) transmission on the data transmission medium, wherein the data transmission medium is a data transmission cable (note column 13, lines 12-38).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 6, 7, 10, 19, 20, 28, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kejsler et al., 6,381,666 (hereinafter Kejsler), as applied to claims 1-5, 8, 21-27, 29-32 above, and further in view of Universal Serial Bus Specification, Revision 2.0, April 27, 2000 (hereinafter USB 2.0).

a. As to claim 6, Kejsler fails to disclose that the storage element is a FIFO and the data forwarding element is a transaction translator.

USB 2.0 discloses that the storage element is a FIFO (note page 344) and the data forwarding element is a transaction translator (note page 297).

It would have been obvious to one of ordinary skill in the art at the time of the invention to employ the use of a FIFO as the storage element, as USB 2.0 teaches, in the system of Kejsler so as to preserve the order of data requests and acks when multiple requests are issued without

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waiting for responses, as is done in split transaction environments, which is supported in USB 2.0 and used by Kejser.

It would have been obvious to one of ordinary skill in the art at the time of the invention to employ the use of a transaction translator, as USB 2.0 teaches, in the system of Kejser so as to allow for the connection of both high and low speed devices.

b. As to claims 7, 28, and 33, Kejser fails to disclose that the preliminary message is a start split and the at least one secondary message is a complete split.

USB 2.0 discloses that the preliminary message is a start split and the at least one secondary message is a complete split (note pages 199-204).

It would have been obvious to one of ordinary skill in the art at the time of the invention to employ the use of start split and complete split messages, as USB 2.0 teaches, in the system of Kejser so as to allow a host controller communicating with a hub operating at a high speed with full-/low-speed devices on some of its downstream ports to start a full-/low-speed transaction via a high speed transaction and then continue with other high-speed transactions without waiting for the full-/low-speed transaction to proceed/complete at the slower speed, as USB 2.0 teaches on page 199, in sections 8.4.2 and 8.4.2.1.

c. As to claims 10, 19, and 20, Kejser fails to disclose the claimed limitations.

USB 2.0 discloses that during a first microframe of a plurality of microframes, each microframe having a microframe duration of equal value, the preliminary message is to be sent from the host to the storage element, the preliminary message is to be sent from the data forwarding element to the device and the reply is to be sent from the device to the data forwarding during a second microframe and the at least one secondary message is to be sent from

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the host to the storage element and the reply is to be sent from the storage element to the host during a third microframe and USB 2.0 discloses that during an eight microframe of a plurality of microframes within a first frame of a plurality of microframes, each microframe having a microframe duration of equal value and each frame consisting of an equal number of microframes, the preliminary message is to be sent from the host to the storage element, the device is coupled to the data forwarding element by a high/full/low-speed bus, the preliminary message is to be sent from the data forwarding element to the device and the reply is to be sent from the device to the data forwarding element during a second frame of the plurality of frames, and the at least one secondary message is to be sent from the host to the storage element and the reply is to be sent from the storage element to the host during a first microframe of a third frame of the plurality of frames, wherein each frame consists of eight microframes (note page 205, pages 374-377).

It would have been obvious to one of ordinary skill in the art at the time of the invention to employ the use of microframes and sending preliminary messages, replies and secondary messages in certain microframes, as USB 2.0 teaches, in the system of Kejser so as to correctly sequence a corresponding full-/low-speed transaction on the downstream facing bus, as USB 2.0 teaches on pages 372-373, section 11.18.

7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kejser et al., 6,381,666 (hereinafter Kejser), as applied to claims 1-5, 8, 21-27, 29-32 above, and further in view of Mizutani et al., 6,603,744 (hereinafter Mizutani).

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As to claim 9, Kejser fails to disclose that the data transmission medium is a wireless data transmission device.

Mizutani discloses that the data transmission medium is a wireless data transmission device (note abstract and column 1, lines 40).

It would have been obvious to one of ordinary skill in the art at the time of the invention to employ the use of a wireless data transmission medium so as to minimize the amount of damage to connectors caused by inadvertent insertion and removal of a connector, as Mizutani teaches in column 1, lines 33-40).

#### ***Allowable Subject Matter***

8. Claims 11-18 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure, as the prior art teaches or suggests extending a USB.

US PG-PUBS: 2002/0010821 A1 Yu et al.

US Patents: 6,584,519 Russell

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sumati Lefkowitz whose telephone number is 703-308-7790.

The examiner can normally be reached on Monday-Friday from 6:00-2:30.



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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached at 703-305-4815.

The fax phone numbers for the organization where this application or proceeding is assigned are:

703-746-7238 for After-Final communications

703-872-9306 for Official communications

703-746-5661 for Non-Official/Draft communications

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.



Sumati Lefkowitz  
Primary Examiner  
Art Unit 2189

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October 28, 2003